

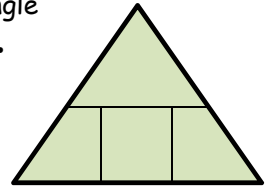
REVIEW - Interest & Credit

Show all work and place final answers on the line provided.

Name: _____

Date: _____

Fill in the triangle



$$I = prt$$

1. Using the **simple interest formula** solve the following problems:

(First step: write the version of the formula you will use. The first letter (before the =) represents what you are trying to find (ie if trying to find the rate, the formula starts with R =)

- a) Drayson invested a principal amount of \$650.00, with an interest rate of 7%, over 4 years. How much interest is earned?

- b) Aydan invested \$800.00 at $5\frac{1}{2}\%$ over 36 months. What is his interest earned? _____

- c) If Sabina earned \$65 interest, by investing some money over 4 years @ 3.9%.
How much money did she invest in the first place? _____

2. Solve the following **compound interest** problems:

$$A = P \left(1 + \frac{r}{n} \right)^{nt}$$

- a) Dylan invests \$400, **compounded semi-annually**, at an interest rate of 5.8%.
How much money will he have at the end of his 8 year investment period? _____

Answers: \$182.00, \$132.00, \$416.67, \$631.98

b) If Christopher invests this same money (\$400, 5.8%, 8 years) **monthly**, how much will he have then? _____

c) Let's say that Darci earned \$250 interest on an investment over 9 years.

She ended up with an **amount** of \$4000 (the Amount = principal + interest).

How much money did she initially invest (**principal**)? (Hint: don't use formula.) _____

d) **BONUS:** Julia invests some money quarterly, at 8% over 5 years.

She ended up with a total **Amount** of \$3000. _____

How much money did she initially invest (principal)? _____

3. Simple interest

a) If Yo Yo Ma invests \$1400 at 3%, calculate (don't estimate) how long will it take for his money to **double**. (round to 1 decimal place) _____

(hint: If his money doubles, what will the final amount be? How much interest is added to \$1400 to get this amount? That is your "I".)

b) What if he invests \$3000 over 8 years and then had an amount of \$6000?

What was the interest **rate**? _____

(hint: How much interest is added to \$3000 to get \$6000?)

Answers: \$633.44, \$3750.00, \$2018.98, 33.3 years, 12.5%

4. Kayley has a credit card with an annual interest rate charge of 19.5% and a monthly **limit** of \$9000. She had a previous balance of \$2700 and made purchases totalling \$600. She made a payment of only \$1100. Her minimum monthly payment must be \$125 or 5% whichever is greater. Calculate the following:

a) The monthly interest rate = _____

b) The finance charge = _____

c) The new balance = _____

d) The minimum payment required = _____

e) The credit available = _____

5. Tristan needs to buy a new bedroom suite for \$2999 (plus taxes) from United Warehouse. They are offering the following "sweet" promotion to entice customers to shop there:

Option 1 - Pay Now: pay full price, **plus PST, GST** and a delivery charge of \$60 (including taxes -ie no tax added) (GST = _____ PST = _____ together = _____)

Option 2 - Pay Later: pay taxes, delivery charge and a \$40 admin. fee (**plus** taxes) now and pay the \$2999 one year from now.

a) Calculate Tristan's *pay-now* price. _____

b) Calculate Tristan's total *pay-later* price.

c) How much more would he pay if he chooses the *pay-later* deal?

d) Express this difference as a percent rate of the total *pay-now* price.

6. Riley likes to shop. She wants to buy a 60" LED TV with Bose surround-sound for Christmas. She found one at Best Buy for \$5000 plus taxes. She needs a loan to pay for this. She decides that she can handle a loan for 5 years. The interest rate is 11%. Using the *financial calculator*, determine:

a) Riley's monthly payments for this loan.

b) The amount of interest Riley will pay for this loan.

Answers: \$3494.07, \$45.20, 1.31%, \$122.84, \$1720.40